

NASA TECH BRIEF



This NASA Tech Brief is issued by the Technology Utilization Division to acquaint industry with the technical content of an innovation derived from the NASA space program.

Frictional Wedge Shock Mount Is Inexpensive, Has Good Damping Characteristics

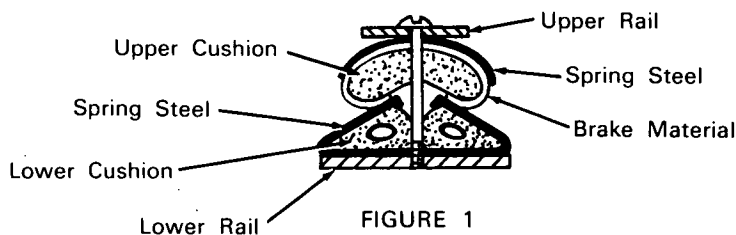


FIGURE 1

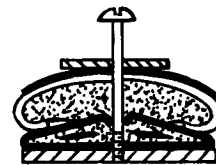
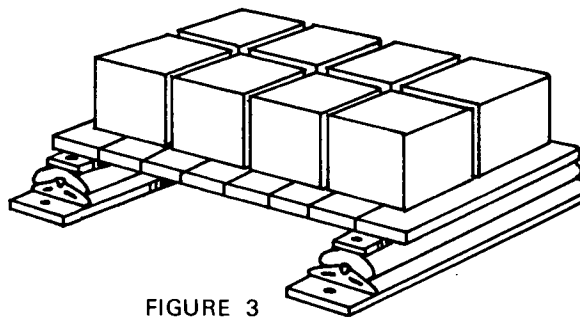
COMPRESSED
FIGURE 2

FIGURE 3

The problem: To design a simple, inexpensive shock mount having desirable damping characteristics.

The solution: A wedge-shaped mount using rubber for energy absorption, and the frictional characteristics of ordinary brake material for damping.

How it's done: The mount, shown unloaded in cross section in Figure 1, consists of two separate cushions, one resting on the other, enclosed by an upper and a lower rail. The upper cushion is a shell

of thin spring steel partially surrounding a sheet of brake lining filled with rubber, the rubber being bonded to the inside of the brake lining. The lower cushion consists of a spring-steel shell filled with rubber bonded to the shell, and resting on the lower rail. When a load is placed on the upper rail, the upper and lower cushions flatten out, as shown in Figure 2, and their contacting surfaces slide against each other. The friction of the brake material of the upper cushion sliding against the spring steel of the lower provides vibration damping.

(continued overleaf)

Notes:

1. This mount may be made in any length desired. Figure 3 shows longer sections of the mount fixed to the underside of a pallet, where it acts as a rail to allow the pallet to be picked up by a fork-lift truck.
2. The mount might also be used to reduce vibrations of mounted machinery, to support truck beds, or within crates used for shipping delicate instruments and machinery.

3. For further information about this innovation inquiries may be directed to:
Technology Utilization Officer
Jet Propulsion Laboratory
4800 Oak Grove Drive
Pasadena, California 91103
Reference: B63-10289

Patent status: NASA encourages commercial use of this innovation. No patent action is contemplated.

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